

CLAIMS

1. A controlling method of a generator having a stator that has a plurality of salient poles, a rotor that has a plurality
5 of salient poles of the number different from the salient poles of the stator, and a winding wound around the stator, characterized by comprising:

executing a reflux mode at both ends of the winding set to the same potential after executing a supply mode for
10 supplying power from a power source to the winding; and

after the reflux mode, executing a regenerative mode for recovering an electromotive force generated in the winding to the power source.

15 2. A controlling method of a generator having a stator that has a plurality of salient poles, a rotor that has a plurality of salient poles of the number different from the salient poles of the stator, and a winding wound around the stator, characterized by comprising:

20 executing an alternating mode for alternately repeating a supply mode for supplying power from a power source to the winding and a reflux mode for setting both ends of the winding to the same potential; and

after the alternating mode, further executing the reflux
25 mode, thereafter executing a regenerative mode for recovering the electromotive force generated in the winding to the power source.

3. The controlling method of the generator according to

claim 2, characterized in that the generator is controlled by a switching circuit having a switching element and a diode connected to both ends of the winding, and the switching element is PWM controlled to execute the alternating mode.

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4. The controlling method of the generator according to any one of claims 1 to 3, characterized in that the voltage of the power source is detected, and a continuation time of one or both of the supply mode and the reflux mode is controlled based on
10 the voltage value.

5. The controlling method of the generator according to any one of claims 1 to 3, characterized in that the voltage of the power source is detected, and the continuation time of one or
15 both of the alternating mode and the reflux mode is controlled based on the voltage value.

6. The controlling method of the generator according to any one of claims 1 to 5, characterized in that the supply mode is
20 started at a time point when the inductance of the winding becomes maximum or at the vicinity thereof.

7. A controlling method of a generator having a stator that has a plurality of salient poles, a rotor that has a plurality
25 of salient poles of the number different from the salient poles of the stator, and a winding wound around the stator, characterized by comprising:

executing a first alternating mode for alternately repeating a supply mode for supplying power from a power source

to the winding and a reflux mode for setting both ends of the winding to the same potential; and

after the first alternating mode, executing a second alternating mode for alternately repeating the reflux mode and
5 the regenerative mode for recovering the electromotive force generated in the winding to the power source.

8. The controlling method of the generator according to claim 7, characterized in that the generator is controlled by a
10 switching circuit having a switching element and a diode connected to both ends of the winding, and the switching element is PWM controlled to execute the first and second alternating modes.

15 9. The controlling method of the generator according to claim 7 or 8, characterized in that the first alternating mode is started before the time point that the inductance of the winding becomes maximum.